

# **LOCK CLAMP APPARATUS**

## **Background of the Invention**

### **1. Field of the invention**

5        The present invention relates to a clamp apparatus for holding things by itself. More particularly, the clamp apparatus can be use in the kitchen and other working place and only uses one hand to operate.

### **2. Description of the Prior Art**

10       Do you remember when you in your kitchen working and some things can be hang up and some can't. Most of the family usually hangs their pots, pans, big spoons or some things else that have a hook behind to hang on the wall. But I guess you forget something else like a piece of cloths or a duster. Why? They are very light, so they won't be able to hang on the hook like 15       pans or pots. A little wind blows out, the duster will fall off from the hook. Most of it are made of soft materials, so it need a handle to open the hook and a stable clip to keep the things stay on the hook. In this way, it helps people who are very busy working in the kitchen. Before finding a new way of hanging lighter things on the hook, I believe there are a lot of difficulties 20       of hanging rages on. When rages are dried, rages will easily fall of the hook because there nothing that can hold the rages on the hook. So, there are many problems of using the hook that we are using for many years.

## **Summary of the Invention**

25       It is an object of the present invention to provide a clamp apparatus which is to solve the placing problem in the kitchen such as the wipe and the

clothes.

The clamp apparatus comprises a clamp seat including a first clip, a second clip, and a space formed between the first and second clips and a stander. The stander could be spun form down to up by the weight of an 5 object, when the stander is moved down by the object. The stander could spin down by the weight of the heavy object or itself, and a holder of the stander and a plane of the first clip fasten the object. Further, the object could fasten on the clamp apparatus by using one hand, and if the object pulls the more down, the tighter it will be on the first clip.

10 By the result of assembling and the technique it have, it can save a lot of space in the kitchen and much more cleaner then it is. In the office or other office, the clamp apparatus can use as holding note pad, memo, and ....etc. The process of using the clamp apparatus can hold heavy things, tightly, and by one hand. It does not need two hands to use the clamp 15 apparatus. It also holds it when the memos are not sticky or no need of magnetite place to hold the things you want. Lock clamp apparatus help people solves many problems such as the mono could not hold on the wall when the glue does not work and the magnetic object holds things on the wall but it limits on the thickness of the object.

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### **Brief Description of the Drawings**

Other features and advantages of the present invention will become apparent in the following detailed description of the preferred embodiments of the present invention, with reference to the accompanying drawings, in 25 which:

Fig. 1 is a schematic view showing the lock clamp apparatus of the present invention;

Fig. 2 is a schematic view showing the assembly of the lock clamp apparatus of the present invention;

Fig. 3 is a schematic view showing the object pushed of the lock clamp apparatus of the present invention;

5 Fig. 4 is a schematic view showing the sticking state of the lock clamp apparatus of the present invention;

Fig. 5 is a schematic view showing the release the object from the lock clamp apparatus of the present invention;

10 Fig. 6 is a schematic view showing the lock clamp apparatus of another embodiment of the present invention; and

Fig. 7 is a top view showing the sticking state of the clamp apparatus of another embodiment of the present invention.

### **Detailed Description of the Preferred Embodiments**

15 Refer to Figs. 1 and 2, a clamp apparatus of the present invention comprises a clamp seat 1 and a stander 2. Refer to Fig. 1, the clamp seat 1 is made of the wood, plastic object, magnetic object, and so on, and comprises a first clip 11 and a second clip 12. The one end of the first and second clips 11, 12 is connected to and forms a space 13 between them which include a 20 working area 14. The first clip 11 is opposite to the area 14 providing a flat holding plane 15 to corporate with the stander 2 generating the holding pressure. Further, the second clip 12 is opposite to the area 14 providing a cavity 16 for assembling and moving of the stander 2. The bottom 17 of the cavity 16 sticks with one side of the stander 2, when the clamp apparatus 25 holds nothing or thin object, refer to Fig. 2. The stander 2 pivots to the cavity 16 of the second clip 12 by a rod 20. The stander 2 has a holder 21 and a leading plane 22 neighbored with the holder 21, and the holder 21 is

placed in the space 13. The holder 21 moves down by a weight at the nature state and sticks to the holding plane 15 of the first clip 11. The leading plane 22 provides a pushing plane for pushing an object 3 into the working area 14. The sticking plane 23 sticks with the bottom 17 of the cavity 16 of the 5 second clip 12 to limit the position when the stander 2 moves down.

The stander 2 sticks with the object 3 through the leading plane 22 by the rod 33 moving up and down. When the object 3 is like thin paper or textile, the sticking plane 23 at the rear of the stander 2 sticks with the bottom 17 of the cavity 16 of the second clip 12 for limiting the angle of 10 moving down. The tight property of the lock clamp apparatus of the present invention is that the stander 2 moves down the lower and sticks the object 3 using the holder 21 with the holding plane 15, so the sticking plane 23 at the rear of the stander 2 sticks with the bottom 17 of the cavity 16 of the second clip 12 to limit the angle of the stander 2 moving down.

15 The back of the first clip 11 of the lock clamp apparatus of the present invention uses to a adhesive tape or glue to fasten on the wall, refer to Fig. 1, and the space 13 of the clamp seat 1 provides a plurality of objects 3 for holding. Refer to Figs. 3 to 5, the releasing operation, the present invention designs to release the object 3 using one hand, so the operating area 14 20 could not pull to change the angle of the stander 2, and the object 3 such as single paper or papers pushes into the area 14 using one hand. When the object 3 pushes into the area 14, the leading plane 22 could lead the object 3 into the area 14 through the holder 21 of the stander 2 and the holding plane 22 of the first clip 11 to make the stander 2 move up. Therefore, the stander 25 2 and the holding plane 15 generate a passing space for the object3.

Refer to Fig. 3, after the object 3 pushes into the space 13, the operator releases the object 3 to let the object 3 move down by itself weight and

make the holder 21 move down. And, when the object 3 has a light weight, the stander 2 moves down to make the object 3 stick between the holder 21 and the holding plane 15, refer to Fig. 4. Further, when the object 3 has heavy weight, the stander 2 moves down by itself weight and stick on the 5 holding plane 15 but the weight of the object 3 moves down by itself weight and makes the stander 2 move down to be generated the tightly pressure to the object 3 by the holding plane 15 and holder 21.

Refer to Fig. 5, to release the object 3 from the clamp seat 1 is that using the object 3 moves the stander 2 right top or left top spin to release the 10 stander 2 which is stoke by the weight of the object 3. So, the releasing space will be bigger between the holder 21 and the holding plane 15, and it is easy to take the object 3.

Refer to Figs. 6 and 7, another embodiment of the present invention, a clamp seat 4 has the same structure of the clamp seat 1 of above 15 embodiment. The holding plane 45, refer to Fig. 6, has a wave or zigzag plane that is different from holding plane 15 of the above embodiment. The holder 51 also has a wave or zigzag plane. Using the wave or zigzag plane of the holing plane 45 and the holder 51 has an excellent friction to easily stick the object, such as the glossy plastic object or thin object.

20 While the present invention has been described in connection with what is considered the most practical and preferred embodiments, it is understood that this invention is not limited to the disclosed embodiments but is intended to cover various arrangements included within the spirit and scope of the broadest interpretations and equivalent arrangements.